



TMDL Implementation Workshop: Valley Region

Frontier Culture Museum, Staunton VA

February 24, 2006

This document provides summaries from breakout sessions that were held during the Valley Region's first TMDL Implementation Workshop. This workshop was specifically focused on water quality and conservation issues facing the Shenandoah Valley. The workshop was designed to bring Valley stakeholders together to learn from one and other's experiences in tackling water quality issues in their own communities and working on implementing TMDLs. A total of 64 people were in attendance, with broad representation from state and local agencies, local government, non-profit organizations and community watershed groups.

Workshop summary

Page(s)

Morning Sessions

Overcoming Obstacles to TMDL Implementation	2-3
Identifying Roles and Responsibilities in Implementation	4-5
Urban Issues in TMDL Implementation	6-7
Getting Stakeholder/Landowner Involvement	8-10
Funding	11-12

Afternoon Sessions

Funding	13
Tributary Strategies and TMDL Coordination	14
Living Under Pollutant Caps	14
Low Cost BMPs	15
Watershed/Comprehensive Planning and TMDLs	16
Monitoring and Impairments	17
Education, Communication and Outreach	18
Engaging Local Governments	19
Giving Government Agencies and Better Name	20

Overcoming Obstacles to TMDL Implementation

- ❖ Maintenance issues- Fence repair and flood insurance for the fence
- ❖ Lack of flexibility in cost share programs; flexibility in the specs (ex. 35' buffers) would be helpful, should offer sliding scale incentives
- ❖ Limited funding sources (need more information on additional funding sources and how funds for implementation can be obtained from these sources)
- ❖ County coordination of funding programs would help in implementation in areas where several TMDLs and implementation plans exist, the current structure of the TMDL program does not allow for coordination in such areas
- ❖ Lack of awareness from the general public of water quality issues and how TMDL Implementation can help to address these issues; education of local government (Boards of Supervisors, Planning District Commissions, Town Councils), citizens, local educators and realtors is critical
- ❖ TMDL Implementation Plans need to be better integrated in local comprehensive plans
- ❖ Partners that can act as “sparkplugs” in the community could help to overcome obstacles in getting the public involved in the process
- ❖ There needs to be more outreach to publicize and clearly explain the implementation process and its benefits
- ❖ Acronyms and jargon that the general public is not familiar with should not be used as frequently as it is in communicating these ideas
- ❖ Posters with watershed and implementation information would be helpful in outreach, landowners could be shown watershed maps with tracts designated on them so that they can locate their property within the watershed, you could also show bmp participants on the maps
- ❖ Interviews with successful participants that could promote the implementation plan and associated cost share programs could be shown on public tv, newsletters could also be sent out to watershed residents with updates on progress in implementation; need to show success to the public
- ❖ Better meeting locations could be identified that may assist in encouraging implementation, it would also help to provide food at meetings
- ❖ Include the Virginia Rural Water Association as a partner in TMDL Implementation
- ❖ Provide incentives to participate in the implementation program such as well testing; this will help to bring people in to the urban and residential programs
- ❖ Large TMDL watersheds could be split in order to better concentrate efforts, this would include splitting funding and staff
- ❖ Have a dinner meeting as close to the impaired stream as possible, this might invoke some peer pressure among landowners to participate
- ❖ Try to invite delegates to more of the meetings, also put more effort into encouraging attendance by local representative, this might be more beneficial since these representatives could help to publicize the TMDL
- ❖ Make personalized mailing and handouts, these need “flash” in order to capture people’s attention; create a clearinghouse of these materials to be shared between implementation project areas

- ❖ Provide consistent themes in information that is presented to the public regarding TMDLs and Implementation Plans; we need to make this process simpler for citizens
- ❖ Our bureaucracy is set up to spend money, not to put conservation on the ground
- ❖ Need to find new participants for cost share programs, this can be difficult since these individuals have been resistant so far (the "high hanging fruit")
- ❖ Need to increase cost share over all and for other practices in addition to agriculture (more funding needs to be available for urban practices)
- ❖ Need good coordination with VA Planning Association, VA Association of Counties and realtors
- ❖ Need to target cost share to the most cost effective practices (both urban and agricultural); a standard by which to judge cost effectiveness could be developed
- ❖ Need to improve continuity of the TMDL program, there is too much waiting between when the TMDL is completed, when the IP is completed and when implementation begins
- ❖ Need to better integrate or dovetail programs including Trib Strategies and the TMDL program
- ❖ Income level can be an obstacle to participation in cost share programs, low income participants need to be better assisted throughout the process; a sliding scale could be used in determining cost share amounts based on income level as well as location in the watershed
- ❖ Need to make it clear that success will be measured through stream monitoring, not just computer models
- ❖ Other than increasing cost share, what other incentives can DCR or other agencies offer? Soil testing (lime, seed, fertilizer, total N), well testing
- ❖ Need a more precise definition of who is eligible for cost share programs; need to better define what we mean by residential and urban programs since we are getting pressure from industries

Identifying Roles and Responsibilities

- Need collaboration between state agencies
- Integrate TMDLs with watershed Planning, Tributary Strategies and Chesapeake Bay program goals
- Develop a framework for natural resource management at the county level; combine local resources to address pollutant issues
- Provide opportunities for citizens to become more involved in local government
- Need to push to meet the Consent Decree, this is what is driving implementation, but where does implementation fit in? We need to pick up the pace in TMDL Implementation
- The 5 year status report showed incremental success, but the goals are still not being met; there is a need for additional funding in order to meet these goals
- Need a committee to evaluate progress in clean-up efforts and provide oversight of the implementation process; this committee could be made up of government staff, Soil and Water Conservation Districts, and citizen groups, in order to have an oversight committee, a dedicated coordinator will be necessary. This person could be funded through state or federal government, this will help to provide accountability for the committee and the coordinator. We will also need to identify a legitimate need for this position in order to obtain funding
- A dedicated funding source is necessary in order to meet implementation goals; who will pursue a dedicated funding source? Someone will have to show dedication; fee systems or taxes could be used to leverage these funds
- This process comes from the top, down, meaning that the federal and state government representatives need to start the ball rolling and provide guidance to localities
- State government needs to provide more clear definitions and guidance in implementing TMDLS; the role of districts, citizen committees and joint committees in defining these guidelines need to be better explained
- We need better coordination between different groups involved in implementing BMPs in order to work together efficiently
- Efforts to coordinate between different groups require funding; providing small amounts of funding might encourage coordination and improve efficiency in implementation
- Need for more action from state and local governments in supporting watershed-wide planning, implementation and coordination
- Defining or including a role for advisory committees in local government and implementation would be helpful in building momentum and raising awareness since these committee's typically have representation from local government
- What does the state believe is going to happen in terms of meeting implementation goals? Are we going to rely solely on voluntary action? Clean up will need to be mandated, we can not rely solely on voluntary participation
- Educational institutions could play a key role in promoting best management practices and educating citizens, they could also identify educational opportunities

- Localities still need more guidance from the state on how to integrate the MS4 program with TMDL Implementation
- Localities rely on state legislation for the authority to push conservation and implementation initiatives, they are not going to make regulations more stringent than what the state provides in their guidance
- EPA's role in the MS4 program should be stronger
- Should vs. Shall: What role should regulations play in water quality issues
- The growing capacity of treatment plants may drive up the need to reduce the NPS load, how is this going to be accomplished?
- Need for better enforcement from the state, while the infrastructure is already in place, the programs are not being properly executed
- Need more staffing in all organizations currently playing key roles in TMDL implementation
- Citizens and localities can step up to the plate and begin dealing with water quality issues, some of these may be addressed through modest amounts of funding

Urban Issues

- Discussion in the first session focused heavily on issues confronting the northern Shenandoah Valley.
- A representative from Frederick County Public Works discussed the issues they face in plan review. The county plan reviewers make an effort to take into account downstream impacts beyond what is required in their current ordinance. This approach is often difficult given the volume of construction projects in Frederick County. Other group members echoed the sentiment that working individually with a developer or contractor to tailor an individual site plan to minimize erosion and downstream impacts is difficult due to the work load in their locality. However, the group discussed several cases where plan reviewer were able to work with contractors to address erosion and possible off-site issues. The comment was made that this is often an easier sell for commercial developers versus residential developers.
- Several members brought up the issue that while development has increased significantly in many parts of the valley, the staffing the localities have available for E&S and other site inspections is basically the same. One public works manager remarked that he recently showed the need for 4 additional inspectors but was approved for only one. The group generally agreed that the lack of staff for inspections greatly reduces the ability of the municipality to ensure that E&S regulations are being followed.
- The group discussed the idea that developing relationships with developers, politicians and regulators is the key to working towards compromise solutions that benefit both water quality and the bottom line of the community. A representative from Winchester discussed how developing relationships with a diverse group has resulted in several successes in terms of responsible development and conservation of open spaces in the process. He described the development of those relationships as a long process and not every case has turned out perfectly for all involved. However, awareness of the ability to protect water quality and allow responsible development has increased.
- Representatives from the City of Staunton and the Lewis Creek Committee discussed the cooperative efforts to address impairments in an urban stream. They also mentioned that the development of relationships has taken time but that with the inclusion of all parties including developers, regulators, City Council and environmental/community groups there is now a greater awareness of water quality issues in urban areas and general understanding that these issues impact the entire community. The involvement of a City Council member from Staunton has been a positive in efforts to address the problems in Lewis Creek.
- The group discussed the problems municipalities face in maintaining, repairing and replacing aging sewer and water infrastructure. A representative with the City of Staunton described their efforts to keep up with deteriorating sewer and water line. Part of that effort entails identifying problem areas through complaints, sending cameras through lines, and water quality monitoring. The

group recognized that keeping up with aging infrastructure is difficult because leaks are often hard to find, repair/replacement work is expensive and due to the age of pipes it is often not known exactly where the infrastructure is. One approach Staunton has taken is to focus repair efforts on water and sewer lines of an age and material that has been a problem in the past.

- The group discussed the lack of understanding of water quality issues in the general development community. Several examples were given related to karst issues and the fact that stormwater that is directed towards or makes its way into sinkholes can impact groundwater and surface water quality. Several members agreed that plan review and inspections are key to educating developers on these issues.

All Aboard!: Getting Stakeholder and Landowner Involvement

- Personal connections are key; neighbors talking to neighbors could get more people involved than anonymous signs posted on roads.
- Another participant asked about the contribution of industry, and how this philosophy could help get them involved? A DCR Watershed Coordinator from Northern Virginia shared his experiences and said that there needs to be a bridge or a purpose for companies to participate. He believed that most small companies want to participate but they need recognition in some way.
- A participant who is working with the National Park Service as a consultant was interested in learning more about how they can be involved in the TMDL implementation process. Many parks institute a watershed concept but responsibility ends at the property line. A NPS employee explained that their Air Pollution involvement extends beyond park boundaries but she wasn't sure about water boundaries.
- Discussion began on what groups are missing from the TMDL Implementation process. A biologist from DGIF wanted to point out that water quality issues are a community problem because so much of the local economy is built on tourism from anglers and boaters, as well as on development. He felt that members of the real estate community and local Chambers of Commerce had been left out of the process but should be included because so much of the local economy is based on property values and tourism. The question was then asked, how do we reach them? His solution was education, suggesting that the connection between their business and the local environment, and how water quality directly impacts them.
- A representative from the Abrams/Opequon watershed remarked that her county government needed to cooperate and collaborate more. She felt there was too much focus on economics in the political drive. She also objected to the idea of rankings of stakeholders, i.e. one group being more important than others. She expressed the belief that ALL people in the watershed were stakeholders, and others added that stakeholders were also downstream.
- How to make these issues prominent in the public's conscience? A representative from the Canaan Valley Institute expressed the belief that this is essentially a question of how to communicate the value of nature as a whole. He believed that a new language needed to be created to express human values of nature and the right value of the costs to nature as well (i.e. coal from West Virginia and the mining practices associated with it). The representative from the National Park Service offered the NPS-used term of "intangible".
- He cited an EPA study out of Fort Mead that found a correlation between benthic stream impairments and infant mortality. There was a high correlation between the two regardless of whether the area was rural or urban. He believed that connecting the human health and water quality (and environmental health in general) in the public arena was going to be the best way to capture the public's attention, as well as creating market-based solutions to problems

Notes from active watersheds:

- The smaller the watershed, the more interest from locals – whether ag or residential land use greatest
- Future water quality is a huge concern

How do we bring people to the table?

- FEAR! And Human health concerns
- How do we make water quality important? Communication!

New approaches for Communication?

- Use simple phrases, watch the language used, put in a way that's easily accessible to everyone – not just environmental scientists!
- One participant suggested a pre-made program at the state-level about water quality
 - Groups that have been missing could be drawn in with interesting (color!) publications
- Remember to explain what a watershed is! Use maps – especially of the locality which you are working in
- Make presentations that point out the community aspects of water quality (depend on everyone, everyone's in a watershed, everyone's activities impact the streams)
- A high school teacher reminded everyone that kids love maps too, and if they are educated properly, they will become knowledgeable citizens

How to educate largely rural population and change behaviors which negatively impact water quality?

- Use Media to advertise when people aren't following protocol? No, these are shy people – don't want to offend anyone
- Have a night clinic for educational purposes
- Use a newsletter for education as well
- Have anonymous phone calls reporting of “cows in stream” or something like that? No – want to keep the campaign positive

Get people involved through FEAR and MONEY:

- Water quality effects everyone – particularly consumers
- Cattle health matters from an economic standpoint
- There's not going to be enough money to pay for BMPs forever

Education in general:

- Standards of Learning (SOLs) tie in to water quality – schools should make effort to connect the two and get kids outside
- Sponsor kids' positive attachment to environment through experiences
- Remember farmer's interests: use the EE approach – Economic and Environmental
- Buffers draw in other stakeholders (conservationists, anglers, hunters)
- Need OTHER water quality BMPs before buffers

How to get water quality information out to people?

- Use the Water Window from Pure Water Forum
- Lose community interest when public meetings are too structured and government takes control (on a stage or podium with suits on, etc).

- Roundtable with stakeholders works – keep the meeting positive
- Use “MESSENGERS”
 - Use social interaction in community, Social bonds between neighbors
 - Keep the local flavor
- Conasauga River Alliance in Georgia a great example

How to get 50 people to attend a public meeting?

- Mailings, citizens committees, Joint Committee with LFSWCD
- Phone calls to individuals
- Use phrase “We need your help!”
- Create a recognizable logo – and perhaps name? (i.e. “Holman’s Conservationists”)
- Make it personal to local community
- Connection to local government very helpful as well
- Multi-stakeholder group in Page County formed by Planning Commission, called Water Quality Advisory Committee
- Fliers, signs through watershed, articles in paper (write it yourself if you don’t trust the reporter!)

Funding

- Questions and Concerns were raised about the funding process in general. Clarification was needed on 319 money: When a watershed is on the IP prioritization list and has an EPA approved IP, designated 319 funds are available but limited (only \$1 million annually total) and can only fund a small number of projects for 5 years. This 319 money has other restrictions as well: no MS4 permitted activities, EPA must approve allocation schedule, and it has time/amount limits as well. TMDL documents used to say that 319 was the sole funding source available for TMDL implementation. This is only one option. Alternative funding sources include: Agricultural Cost Shares, WQIF requests as well as Federal Funds (like USDA, DREP, EQUIP, etc.). The concern was expressed that long term solutions must be focused on; for instance, can 319 funds be used for permanent easements and riparian easements?
 - The question was raised, “How can local governments and community groups get the implementation done on our own?” Since people are ready to do stuff before the money is available, it’s best to keep people active and involved in water quality issues and do whatever they can. Meanwhile, keep applying for grants and searching for funding elsewhere.
 - Although there has been lobbying for more Chesapeake Bay funds, no one has heard about lobby of Federal Funds. Is this going on? And how much flexibility is there to use Federal Funds to supplement regular state cost-share funds? The answer was given that this is being done now, but it’s easier to do if the landowner can reduce their cost-share contribution further and get the “money out the door”. The suggestion was made to contract with a company to do the work and have them pay the bills instead of the landowner.
- When discussing IP development, watersheds must be aware that no state money is committed to IP development and no 319(h) money is available right now. All IPs to be developed in the future will be done internally with DCR staff with decisions made based on priority lists (prioritized by DEQ and DCR). However, being prioritized for an IP does not mean that the watershed will be eligible for 319 funds for implementation. The next list for the TMDLs developed between 2003-2005 will be finalized around April 2006. There is a State Senate Bill currently before the legislature that would provide 15 DCR positions in the Division of Soil and Water Conservation, but only about half of these (6-7) would be TMDL with the others going to other NPS programs.
- When discussing Long-term funding, most of the money is available from the WQIF. For 2004, \$240 million was set aside for Trib. Strategies and TMDLs but \$200 million is for point sources and \$40 million for nonpoint sources.
 - The comment was made that money motivates people to change their actions.

- The question was raised whether there were plans to coordinate the deadlines for 2010 TMDL Consent Decree schedule and 2010 Tributary Strategies reductions. The Consent Decree is based on a late 1990's lawsuit against Virginia (as well as other states) for not sufficiently developing TMDLs on impaired streams. All impaired waters on the impaired list as of 1998 must have a TMDL by 2010 as part of this agreement. Tributary Strategies will be implemented at a county basis.
- Concern was expressed about the rising price tag of implementation. The state is attempting to use Cost-Benefit Analysis to analyze implementation after IPs are developed, but this is difficult. For example, Cooks/Blacks IP has a price tag of \$122 million while other watersheds' IP only require \$10. Should the state make decisions based on Cost-Benefits or on residential interest/participation? This is made more confusing because the state is so varied in landforms (coastal vs. mountain) and land use (ag vs. urban). The suggestion was made to give a "measure of improved water quality" or a study of how citizens will value the improvement of water quality (current study underway by WVU).
 - Because of the change in the bacteria standard from Fecal Coliform to E. Coli, it is more difficult and costly to meet the state standard. The cost of clean-up increases because almost 100% stream exclusion is required on ag lands to achieve water quality standards (example: in Cooks Creek, to get last additional 15% load reduction it would require the installation of a retention pond on ag land. Buffer strip won't treat enough bacteria to meet E. Coli TMDL).
 - Remember, these landscapes will continue to degrade and the cost to clean them up will increase.

Afternoon Sessions

Funding

- It is important that we pursue and obtain long-term funding for water quality issues
- We need to improve our water quality not just because of legal factors (the consent decree), but also because it will improve quality of life and preserve our resources and protect their value
- We receive funding for TMDL and Implementation Plan development with the idea that these documents won't just sit on the shelf, but that they will be implemented
- We need to keep our focus on preservation of our resources since it is just as important as restoration. Additionally, restoration of degraded resources involves maintenance and BMPs have a limited life span. With most communities facing strong development pressure, it is often easier to prevent environmental degradation from development rather than cleaning it up after it has already occurred (e.g. implement conservation easements). It is critical that we both preserve and restore our natural resources.
- Empowering grassroots efforts may help to reduce the costs of implementation. While the state is addressing funding issues to foot the bill for statewide implementation efforts to improve water quality, it is also important that we find a way to inform citizens and small communities of what they can do to help. Some ways that we might accomplish this are better advertising to promote programs, connections of actions for individuals with water quality improvements (e.g. Chesapeake Bay Club advertisement)
- We can conduct a Use Attainability Analysis when we have done all that we can in eliminating human sources of water pollution through the TMDL process. Funding levels and water quality goals will be leading us to this option more often in the future.
- In 2005, a legislative committee asked how much it would cost to not only implement Tributary Strategies, but also TMDLs in Virginia. Estimates were developed; however, these will be outdated in a few years as we develop more TMDLs and more Implementation Plans based on new water quality standards.
- Localities can play an important role in meeting pollutant load reductions in a TMDL through the implementation of programs such as Erosion and Sediment Control.
- Section 319 Funds (EPA) will not fund all that needs to be done. State Water Quality Improvement Funds will play a bigger role in funding projects as federal funding decreases over the next several years.
- There is not funding available from EPA this year for implementation plan development (only for implementation).

Tributary Strategies and TMDL Coordination

- How can Tributary Strategies be implemented at the local level? Implementation #'s are now available at the county level
- There is currently a disconnect between state and local government, this is a significant obstacle that must be overcome in order to implement Tributary Strategies at the local level
- It is very difficult to break the output from the Bay Model down into small watersheds in order to implement Trib Strategies; how accurate are these local #'s?
- TMDL Implementation will result in nutrient and sediment reductions that can be translated into Trib Strategies reductions as well; these programs can work together to produce mutual benefits
- If we focus only on TMDL watersheds in implementing BMPs, would we still be able to meet our Trib Strategies goals? Is there a need to expand well beyond these watersheds?
- We would be more efficient if we devoted our resources to all of our water quality problems and associated goals at the same time
- Could watersheds be lumped together in order to implement TMDLs and address Trib Strategies goals? Would this be a suitable way to coordinate between these programs and allow for better integration?
- Having TMDL watersheds and working to implement the Tributary Strategies program helps to get more funding for implementation

What's Next: Living Under Pollutant Caps

- EPA and state agencies are not going to be able to implement and regulate the TMDL program
- Discussion of the Consent Decree and its role in driving TMDL studies
- If a watershed does not have a TMDL Implementation Plan, how will this affect funding opportunities for implementation?
- Growth is a major factor to be considered when developing plans for impaired streams, this is a constant cycle
- Has a timeline for nutrient trading been developed? How is this going to work, and are we going to see more and more of it in years to come?

Low Cost BMPs (Urban and Agricultural)

- ❑ Success has been achieved with polywire fencing in the North River TMDL project area where there is a large Mennonite Community that will not accept cost share
- ❑ Limited funding often restricts participation in BMP programs
- ❑ Inexpensive practices might not meet specs and qualify for cost share, but they may be effective; we need to catalog these practices to encourage people to implement practices that might not otherwise participate; we need to generate a mechanism to do this
- ❑ Try to target low income individuals with programs, how can we help these people? Is there a means to determine income eligibility? How can their needs be met based on existing programs
- ❑ It is helpful when landowner only have to come up with their portion of the BMP cost (they should not have to pay for it all up front and then be reimbursed)
- ❑ Can we come up with additional funding for assistance?
- ❑ What are some of the cheaper practices that do produce water quality benefits?
- ❑ What types of practices could businesses, churches and schools implement (what they could do would be very different from farmers and landowners)
- ❑ One example of a lower cost agricultural practice alternative is an evapotranspiration bed to treat parlor water. The water goes in to the constructed bed where plants take up the excess nutrient. This could be done fairly inexpensively; however, information on the practice is difficult to locate
- ❑ We need to find a happy medium in programs to provide assistance, we can't have an all or none attitude or we won't get the cattle out of the stream
- ❑ Could a catalog be created and distributed by VA Tech Cooperative Extension? What role could the districts play in creating and sharing it with landowner and other organizations? A non-profit organization could also assist with the project.
- ❑ Education is a critical component in encouraging people to install conservation practices, once a homeowner is educated on issues, they will educate their neighbors
- ❑ It would be useful to have homeowners present at septic pumpouts in order to learn more about septic system maintenance
- ❑ How can education be tied in to this catalog?
- ❑ Rain barrels are a low cost urban/residential bmp that could be used to catch stormwater
- ❑ While raingardens can be expensive for homeowners to implement, some of the principles used in raingarden design can be employed at a relatively low cost

Watershed/Comprehensive Planning and TMDLs

- TMDL Implementation and watershed management both need to be tied in to comprehensive planning: address TMDLs, integrate programs and determine how to manage natural resources for water quality
- Need specific educational materials directed at planners (such as the American Planning Association) and local government. It is useful to have people from outside of the planning community come and speak to them (e.g. League of Cities)
- It may take several years to communicate these ideas to planners, will need to change topics to address current issues in planning; need to introduce planners to some of the semantics for watershed planning and provide good background information
- Most planners do not have time to develop new ordinances or guidelines, they need to be provided with this type of guidance
- DCR has several useful materials including a publication “A Community Watershed Approach” and a DVD with several watershed planning case studies, DCR also has sample watershed plans posted on their website; these materials need to be more widely disbursed and should be given to area planners
- Need to talk to VA Planning Association and get on the agenda for this spring
- DCR should play a key role in promoting watershed planning on the statewide level since they will have more credibility as a state agency
- The Loud Fairfax SCD has developed 5 powerpoint presentations for local government (funded by DCR). They provide these presentations to localities and address urban and residential issues, they could easily be modified for other regions of the state
- Funding is available for watershed planning through grants including the National Fish and Wildlife Small Watersheds Grants Program and DCR’s Water Quality Improvement Fund
- In Page County, the TMDLs for several impaired watersheds in the county are driving watershed planning and helping to form some of the issues that the plan will address
- A TMDL Implementation Plan has a specific set of funds, but these funds are not intended to address other aspects of a watershed plan (maybe these two efforts should remain separate?)
- Watershed planning should be included in the general curriculum for planning programs at universities (universities should address watershed planning concepts in their planning courses), this in turn will help to foster support from universities for watershed planning and will give more credibility to these projects
- Taking the next step: how do we encourage localities to accept guidance? Need to put together talking points (a “policy guide”), model ordinances would also be very helpful
- It is difficult to balance public relations with implementation and other activities (state agencies do not have the time or the resources)

- Need coordination to get materials and messages out to everyone; it would be helpful to have subject matter experts to coordinate and communicate with each other
- Can someone at DCR work with watershed level planning? Regional managers and watershed field coordinators in DCR's field offices work with localities and organizations interested in conducting watershed planning, support for this process on the local level is critical in determining what type of role the state can play in guiding the process and informing the community
- What type of role can Regional Planning Commissions play in promoting watershed planning? The Planning District Commissions conduct water resource planning in accordance with state law, right now they are primarily addressing water quantity issues (current efforts are focused on minimum in stream flow studies), but there is hope that water quality issues will grow increasingly important.
- We need to look at planning from the resource end of things, currently localities are too focused on development
- Excellent GIS resources are available for large scale watershed planning
- Localities and other organizations interested in pursuing watershed planning need support from DCR in order to move to a higher or larger level like regional conferences where information on watershed planning can be presented; localities and Conservation Districts can handle things on the local level

Monitoring and Impairments

- DEQ has a two year process for rotational monitoring
 - Stations monitored for two years (and then off for 4 years) in a six-year overall rotation state-wide
- The 10.5% rule
 - Stream segments are impaired when 10.5% (or greater) of the samples taken violate water quality standards
 - For example: If a stream had 12 E. Coli samples taken in a two year period, and three samples violated the standard, this would be a 25% violation rate and the waterbody would be impaired
- Legal Agreement obligations
 - Federal Clean Water Act (1972) requires monitoring and development of TMDL plans for impaired waters
 - Consent Decree impaired waters required to have TMDL completed by 2010
 - Virginia's WQMIRA (1997) requires TMDL Implementation Plan development for each TMDL written
- State-wide Assessment takes place in even years (2002,2004,2006)
 - Data from 2006 assessment will be released in upcoming months
 - Check DEQ website for more details
- Riverine vs. Lacustrine standards
 - There are two different sets of standards for rivers/streams and for lakes. Lake standards take into effect the different stratified layers and their individual water qualities.

- Nutrient criteria for lakes will be complete by 2008 assessment and this will change how DEQ assesses lakes
- Citizen monitoring data can be used for listing/delisting waters only if the lab is DEQ Certified for quality assurance/quality control
 - However, all citizen monitoring gives us a great current, on-the-ground picture of what's going on in the watershed

Education, Communication and Outreach

- ❖ Two main categories: 1) Human health 2) Economics
- ❖ Neighbor-to-Neighbor, Farmer to Farmer and Government to Government education is highly effective
- ❖ Factors including how a room is set up and how a presenter speaks are very important in clearly communicating concepts.
- ❖ Citizen groups within the watershed should run the meetings, and presentations about the TMDL Program can be given by state and local staff who are familiar with the concepts; groups to present to include: Ruritan Clubs, Rotary Clubs, and watershed groups)
- ❖ Need to have positive speakers who can talk about success stories and individuals who have participated in these programs to give testimonials
- ❖ There is a need to show something positive now, rather than talking about the future; DCR and DEQ presentations should be revised to be more positive, more exciting and simpler
- ❖ Need a local leader within a watershed to spark interest within the community
- ❖ Need to invite the media, teachers, and Chamber of Commerce to meetings
- ❖ It may take a whole generation to education communities about TMDLs
- ❖ Need to identify more opportunities for colleges to be involved in the TMDL process (research, demonstration sites, education...)
- ❖ Need to assist and support citizen monitoring groups, this gets the community involved in water quality issues
- ❖ Need to develop a framework or infrastructure for the TMDL program that can be adapted to a local level
- ❖ Advertising to the general public ideas: well testing incentives, door hangers “Bait and Hook”
- ❖ Run ideas by a non-environmental audience to determine average knowledge of the subject matter in a community before developing outreach materials and presentations
- ❖ Work with students from local colleges to develop better marketing ideas
- ❖ Develop a motto for the whole state for water quality issues, this can be used in social marketing campaigns
- ❖ Develop tag lines or sound bytes and bring them to focus groups to see how clearly messages are communicated
- ❖ Have stream or river meetings: go through local groups like the Ruritan Club and explain the history of the watershed before getting in to the science

Engaging Local Governments

- Making a long term commitment to work on issues will have an influence on local community and government representatives
- It is important to establish a relationship with local politicians, in turn, they will be more likely to participate in public meetings and other events
- State and local conservation agencies should stay bipartisan when working with local government and politicians since everyone is a stakeholder when dealing with environmental issues
- In order to get the “come here’s” to work together with the “from here’s” it is important to engage these communities in a number of different issues and attempt to find a consensus
- The economy is the main focus of citizens and politicians; consequently, it is important that we examine watershed issues from an economic standpoint as well and an environmental standpoint. We need to better define some of the economic benefits of clean water: tourism dollars, BMPs translate to healthier livestock and better stream quality, when developers implement practices to improve the environment, property values increase. We must determine how to sell these economic benefits.
- We need to increase local understanding of how state programs relate to local water quality issues. In order for this to happen, there needs to be better two-way communication between state and local entities (they need to speak the same language and have the motivation to work collaboratively on conservation issues)
- It would be helpful for the conservation community to find candidates for local government that are environmentally concerned to run for office. This should be a grassroots effort to find the right people.
- We need to bring public importance to water quality issues. Citizens committees like those in Page County and the City of Staunton are an effective means of engaging communities. In Page County, the citizens committee was formed after a leak from a land fill began affecting a trout stream in the County.
- The Regional Water Resources Policy Committee is another way to allow citizens to work with local government on water quality issues. The committee is working on water quality, quantity and timing issues and is very involved with local government
- Local government has the tools to affect water resources through comprehensive plans, local ordinances and enforcement authority.
- Citizen education is extremely important in order for these issues to be brought to the local community’s attention. The Lord Fairfax Soil and Water Conservation District has done some great education initiatives including erosion and sediment control programs. The district has worked to develop a close relationship with the Board of Supervisors for their region and have worked to develop regional erosion and sediment control plans.

Giving Government Agencies a Better Name

- We have so many agencies working towards the same goals; however, many of them have bad reputations and do not work cooperatively in meeting these goals
- Some agencies appear to be helpful, but are not really helping to meet these goals, instead they take the standpoint of “You do this or else”. This is not an effective way to get people to participate in conservation programs where cost remains an obstacle for many landowners despite cost share assistance.
- Education is very helpful in working with landowners to put conservation on the ground.
- The Virginia Dept. of Health does not rely on fines to bring people into compliance, instead they rely on corrective action.
- Many people don’t want to participate in government programs because they feel that there are too many strings attached. We have to find ways to get more people engaged in these programs. The way that public meetings are run is very important in determining local engagement, it is important that we talk with the public, not at them.
- It only takes one person within an agency to make a difference in changing people’s views about the government and water quality issues.
- We should have had representation from EPA at the workshop since they provide funding for the state to carry out the program.
- We need to stop using so many acronyms, the public does not understand these
- It would be useful to come up with a motto for water quality in VA, perception goes a long way.